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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,959	11/19/2003	Bogdanovich Alexander	7100-038	6455
4678 7590 01/08/2008 MACCORD MASON PLLC 300 N. GREENE STREET, SUITE 1600 P. O. BOX 2974 GREENSBORO, NC 27402				
EXAMINER JOHNSON, JENNA LEIGH				
ART UNIT		PAPER NUMBER		
1794				
MAIL DATE		DELIVERY MODE		
01/08/2008		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/716,959

**Applicant(s)**

ALEXANDER ET AL.

**Examiner**

Jenna-Leigh Johnson

**Art Unit**

1794

**Period for Reply** -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 31 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 8-10, 13-24, 26-29 and 31-40 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-7, 11, 12, 25 and 30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/888)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_
- Paper No(s)/Mail Date \_\_\_\_\_

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 31, 2007 has been entered.

### ***Response to Amendment***

2. The Amendment submitted on September 24, 2007, has been entered. Claim 1 has been amended. Therefore, the pending claims are 1 - 40. Claims 8 - 10, 13 - 24, 26 - 29, and 31 - 40 are withdrawn from further consideration as being drawn to a nonelected invention.

### ***Claim Rejections - 35 USC § 102***

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 1 - 7, 11, and 25 stand rejected under 35 U.S.C. 102(a and e) as being anticipated by Hill et al. (US 2003/0211797) for the reasons of record.

5. Claims 1 - 7, 11, 12, 25, and 30 are rejected under 35 U.S.C. 102(e) as being anticipated by Ebbesen et al. (6,856,715).

Ebbesen et al. is drawn to a composite fabric comprising electronic or optoelectronic circuitry for implementing electronic or optical functions (column 1, lines 10 - 20). The circuits are produced by weaving, knitting, crocheting, etc. (column 6, lines 50 - 60). As shown in figure 3d, the fabric can comprise separate parallel layers which are connected together with a z-direction yarn. The components in the fabric cause the fabric to exhibit varying chemical or electrical properties to create a sensor or

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detector within the fabric structure (column 7, lines 5 - 24). The fabric can be made by using conductive and nonconductive fibers as well as optical fibers to create an integrated structure (column 6, lines 5 - 15).

With regards to the limitation of when the system, device, or network is incorporated into the fabric structure, these limitations are considered method limitations in a product-by-process claim. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same or an obvious variant from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). The burden has been shifted to the Applicant to show unobvious differences between the claimed product and the prior art product. *In re Marosi*, 218 USPQ 289, 292 (Fed. Cir. 1983). In the present case, the final product regardless of when the network, system, or device is added, would be a composite woven fabric with a system, network, or device integrated into the structure of the fabric. Ebbesen et al. teaches that the circuitry (i.e., the network, device, or system) is integrated into the structure of the fabric in the final product. Thus, Ebbesen et al. teaches the claimed final product. Therefore, claims 1 - 7, 11, 12, and 30 are anticipated.

With regard to claim 25, the claim recites limitations with regards to how the fabric is used. It has been held that a recitation with respect to the manner in which a claimed product is intended to be employed does not differentiate the claimed product from a prior art product satisfying the claimed structural limitation. *Ex parte Masham*, 2 USPQ2d 1647 (1987). Therefore, how the fabric is used is not given patentable weight. Claim 25 is rejected along with claim 1.

#### ***Claim Rejections - 35 USC § 103***

6. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

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7. Claims 12 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hill et al. in view of Jayaraman et al. for the reasons of record.

### ***Response to Arguments***

8. Applicant's arguments filed September 24, 2007 have been fully considered but they are not persuasive. The applicant argues that the yarns which travel in the Z-direction to connect the multiple layers together do not count as z-direction yarns because they travel in the x- or y-direction as well. However, there is no requirement in the design of general three-dimensional woven fabrics that a z-direction yarn must only travel in the z-direction or exclude yarns which travel in both the z-direction and the x- or y-direction from being considered z-direction yarns. The yarns which Hill et al. teaches connect the layers together travel part of the time in the z-direction of the fabric and connect the layers together. Thus, the read on the claimed z-direction yarn. With regard to the amended claim 1 which requires that the fabric include a third system of fibers which travel in a third direction, again the yarns are not excluded from traveling in other directions. Thus, the yarns which connect the layer together in the vertical direction are considered the third system of yarns. Further, it is noted that the applicant's own drawings show that the z-direction yarns do not solely travel in the z-direction, but spend some time in the x- or y- direction when the yarns switch directions and cross over or cross under the x- and y- yarns. The fact that the weave pattern in Hill et al. is more open and the z-direction yarns are not solely in the z-direction does not exclude the yarns from reading on the claimed z-direction yarns. Therefore, the rejection is maintained.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jenna-Leigh Johnson whose telephone number is (571) 272-1472. The examiner can normally be reached on Monday - Friday (8:00 - 5:30).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

jlj  
January 7, 2008

/Jenna-Leigh Johnson/  
Primary Examiner, Art Unit 1794